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E6M1/0323

LARKIN, E.

EXAMINER

ART UNIT

PAPER NUMBER

2605

03/23/95

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. ✓ |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. ✓ | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-40 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-40 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

2. The drawings are objected to because they do not include certain reference signs mentioned in the description. 37 CFR § 1.84(p) states, "Reference signs not mentioned in the description shall not appear in the drawing and vice versa." The following reference signs are not included in the drawings:

Numeral 24, the "force transmitting means/sample holder",
page 23, lines 6, 8, 11, 22, and 25,
page 24, lines 2 and 6,
page 25, lines 1 and 8, and
page 28, line 7. Correction is required.

3. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the features cancelled from the claim.

Claims 2 and 14: The "force sensor mounted to the fixed base".

Claims 3 and 15: The "probe mounted force sensor" and the "sample mounted to the scanning head".

Claims 4 and 16: The "probe mounted on the sensor" and the "sensor in turn mounted on the scanning head".

✓ Claims 5 and 17: The "probe mounted to a fixed surface" and the "sample mounted to the force sensor and further mounted to the scanning head". No new matter should be entered.

4. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of two parts:

a) A separate letter to the Draftsman in accordance with MPEP § 608.02(r); and

b) A print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02(v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketch with proposed corrections shown in red ink is required in response to this Office Action, and *may not be deferred*.

✓ 5. The specification is objected to because it does not include certain reference signs shown in the drawings. 37 CFR § 1.84(f) states, "Reference signs not mentioned in the description shall not appear in the drawing and vice versa." The following reference signs are not mentioned in the description:

Numeral "27", figure 1. Correction is required.

✓ 6. The Abstract of the Disclosure is objected to because the phrase "is disclosed" appears in the abstract. Correction is required. See M.P.E.P. § 608.01(b).

7. Claims 8, 11, 12, 28, 31, and 32 are objected to because of the following informalities:

Re claim ~~8~~ and ~~28~~: The verb -- are -- should be inserted between "patterns" and "coincidentally".

Re claims 11, 12, 31, and 32: The phrase "pick-up" should be rewritten as -- pickup -- to maintain consistency with claims ~~1~~ and ~~25~~. Appropriate correction is required.

8. Claims 1-6, 13-18, 25, 26, 29, 33, and 34 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1: The phrase "said piezo actuated head" lacks antecedent basis.

Re claims ~~1-5~~, ~~13-17~~, ~~25~~, and ~~33~~: Is the '3-D piezo actuator 58' the same device as the "scanning head" or the "piezo actuated head"?

(NOTE: The applicant is encouraged to amend either the [specification and claims] or [Figure 2] so as to maintain consistency in the terminology that is present in all three.)

Re claims 4 and ~~16~~: The phrase "said sensor" lacks antecedent basis.

Re claims ~~6~~, ~~18~~, ~~26~~, and ~~34~~: To what is the "output signal of the force sensor converted"?

Re claim ~~13~~, lines 14 and 43: The phrase "said sensor element" lacks antecedent basis.

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/Re claim 13, lines 54 and 55: The phrase "said piezo actuated head" lacks antecedent basis.

/Re claim 25, line 34: The phrase "said central portion" lacks antecedent basis.

/Re claim 29: The phrase "said second drive plate" lacks antecedent basis.

/Re claim 33, lines 14 and 43: The phrase "said sensor element" lacks antecedent basis.

NOTE: Prior art was not relied upon to reject claims 1-40 because the prior art fails to teach and/or make obvious a force sensor having the claimed structure/details in combination with a probe and means for translating output signals from the force sensor into surface topography readings/images.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art discloses indentors and force microscopes having load cells/strain gauges/capacitance probes attached to the sample stage or the measurement probe.

10. Claims 1-40 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 112.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Larkin whose telephone number is (703) 308-6724. The examiner can normally be reached on Monday-Friday from 7:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams, can be reached on (703) 305-4705. The FAX telephone number for this Group (Group 2600) is (703) 305-9508.

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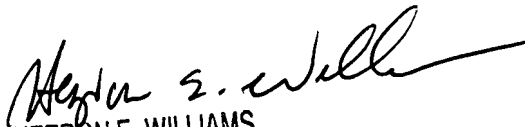
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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.



Daniel Larkin

March 15, 1995



HEZRON E. WILLIAMS
SUPERVISORY PATENT EXAMINER
GROUP 260